figured.

PAGE: 1



1646 RUSH

#9

DATE: 04/19/1999 TIME: 08:36:41

INPUT SET: S31519.raw

36:41 05/19/59

RAW SEQUENCE LISTING PATENT APPLICATION US/09/144,502A

This Raw Listing contains the General Information Section and up to the first 5 pages.

SEQUENCE LISTING (1) General Information: (1) APPLICANT: SMITH, Craig A. GOODWIN, Raymond G. BECKMANN, M. Patricia (1) TITLE OF INVENTION: DNA ENCODING TUMOR NECROSIS FACTOR-Á AND - RECEPTORS (1) TITLE OF SEQUENCES: 4 (1) (iii) NUMBER OF SEQUENCES: 4 (2) (iv) CORRESPONDENCE ADDRESS: (A) ADDRESSE: IMMUNEX CORPORATION (B) STREET: 51 University Street (C) CITY: Seattle (D) STATE: WASHINGTON (E) COUNTRY: U.S.A. (F) ZIP: 98101 (V) COMPUTER READABLE FORM: (A) MEDIUM TYPE: Floppy disk (B) COMPUTER: IBM PC compatible
8 9 (ii) TITLE OF INVENTION: DNA ENCODING TUMOR NECROSIS 10 FACTOR-Á AND - RECEPTORS 11 12 (iii) NUMBER OF SEQUENCES: 4 13 14 (iv) CORRESPONDENCE ADDRESS: 15 (A) ADDRESSEE: IMMUNEX CORPORATION 16 (B) STREET: 51 University Street 17 (C) CITY: Seattle 18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (v) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
8 9 (ii) TITLE OF INVENTION: DNA ENCODING TUMOR NECROSIS 10 FACTOR-Á AND - RECEPTORS 11 12 (iii) NUMBER OF SEQUENCES: 4 13 14 (iv) CORRESPONDENCE ADDRESS: 15 (A) ADDRESSEE: IMMUNEX CORPORATION 16 (B) STREET: 51 University Street 17 (C) CITY: Seattle 18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (v) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
8 9 (ii) TITLE OF INVENTION: DNA ENCODING TUMOR NECROSIS 10 FACTOR-Á AND - RECEPTORS 11 12 (iii) NUMBER OF SEQUENCES: 4 13 14 (iv) CORRESPONDENCE ADDRESS: 15 (A) ADDRESSEE: IMMUNEX CORPORATION 16 (B) STREET: 51 University Street 17 (C) CITY: Seattle 18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (v) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
8 9 (ii) TITLE OF INVENTION: DNA ENCODING TUMOR NECROSIS 10 FACTOR-Á AND - RECEPTORS 11 12 (iii) NUMBER OF SEQUENCES: 4 13 14 (iv) CORRESPONDENCE ADDRESS: 15 (A) ADDRESSEE: IMMUNEX CORPORATION 16 (B) STREET: 51 University Street 17 (C) CITY: Seattle 18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (v) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
9 (ii) TITLE OF INVENTION: DNA ENCODING TUMOR NECROSIS 10 FACTOR-Á AND - RECEPTORS 11 12 (iii) NUMBER OF SEQUENCES: 4 13 14 (iv) CORRESPONDENCE ADDRESS: 15 (A) ADDRESSEE: IMMUNEX CORPORATION 16 (B) STREET: 51 University Street 17 (C) CITY: Seattle 18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (v) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
FACTOR-Á AND - RECEPTORS 11 12 (iii) NUMBER OF SEQUENCES: 4 13 14 (iv) CORRESPONDENCE ADDRESS: 15 (A) ADDRESSEE: IMMUNEX CORPORATION 16 (B) STREET: 51 University Street 17 (C) CITY: Seattle 18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (v) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
11 12 (iii) NUMBER OF SEQUENCES: 4 13 14 (iv) CORRESPONDENCE ADDRESS: 15 (A) ADDRESSEE: IMMUNEX CORPORATION 16 (B) STREET: 51 University Street 17 (C) CITY: Seattle 18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (V) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
(iii) NUMBER OF SEQUENCES: 4 (iv) CORRESPONDENCE ADDRESS: (A) ADDRESSEE: IMMUNEX CORPORATION (B) STREET: 51 University Street (C) CITY: Seattle (D) STATE: WASHINGTON (E) COUNTRY: U.S.A. (F) ZIP: 98101 (V) COMPUTER READABLE FORM: (A) MEDIUM TYPE: Floppy disk (B) COMPUTER: IBM PC compatible
13 14 (iv) CORRESPONDENCE ADDRESS: 15 (A) ADDRESSEE: IMMUNEX CORPORATION 16 (B) STREET: 51 University Street 17 (C) CITY: Seattle 18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (v) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
(A) ADDRESSEE: IMMUNEX CORPORATION (B) STREET: 51 University Street (C) CITY: Seattle (D) STATE: WASHINGTON (E) COUNTRY: U.S.A. (F) ZIP: 98101 (V) COMPUTER READABLE FORM: (A) MEDIUM TYPE: Floppy disk (B) COMPUTER: IBM PC compatible
16 (B) STREET: 51 University Street 17 (C) CITY: Seattle 18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (V) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
17 (C) CITY: Seattle 18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (v) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
18 (D) STATE: WASHINGTON 19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (V) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
19 (E) COUNTRY: U.S.A. 20 (F) ZIP: 98101 21 22 (V) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
20 (F) ZIP: 98101 21 22 (V) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
21 22 (V) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
22 (V) COMPUTER READABLE FORM: 23 (A) MEDIUM TYPE: Floppy disk 24 (B) COMPUTER: IBM PC compatible
(A) MEDIUM TYPE: Floppy disk (B) COMPUTER: IBM PC compatible
25 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
26 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25 27
28 (vi) CURRENT APPLICATION DATA:
29 (A) APPLICATION NUMBER: 09/144,502
30 (B) FILING DATE: 31-AUG-1998
31 (C) CLASSIFICATION:
32
33 (vii) PRIOR APPLICATION DATA:
34 (A) APPLICATION NUMBER: 08/346,555 35 (B) FILING DATE: 29-NOV-1994
35 (B) FILING DATE: 29-NOV-1994 36
37 (vii) PRIOR APPLICATION DATA:
38 (A) APPLICATION NUMBER: 07/523,635
39 (B) FILING DATE: 10-MAY-1990
40
41 (vii) PRIOR APPLICATION DATA:
42 (A) APPLICATION NUMBER: 07/421,417
43 (B) FILING DATE: 13-OCT-1989 44
44 45 (vii) PRIOR APPLICATION DATA:
46 (A) APPLICATION NUMBER: 07/405,370

RAW SEQUENCE LISTING PATENT APPLICATION US/09/144,502A

DATE: 04/19/1999 TIME: 08:36:41

INPUT SET: S31519.raw

```
(B) FILING DATE: 11-SEPT-1989
47
48
        (vii) PRIOR APPLICATION DATA:
49
50
               (A) APPLICATION NUMBER: 07/403,241
51
               (B) FILING DATE: 05-SEPT-1989
52
53
       (viii) ATTORNEY/AGENT INFORMATION:
54
               (A) NAME: KIT, Gordon
               (B) REGISTRATION NUMBER: 30,764
55
56
               (C) REFERENCE/DOCKET NUMBER: A-7210
57
58
         (ix) TELECOMMUNICATION INFORMATION:
59
               (A) TELEPHONE: (202) 293-7060
60
               (B) TELEFAX: (202) 293-7860
61
62
63
     (2) INFORMATION FOR SEQ ID NO:1:
64
          (i) SEQUENCE CHARACTERISTICS:
65
66
               (A) LENGTH: 1641 base pairs
67
               (B) TYPE: nucleic acid
68
               (C) STRANDEDNESS: single
69
               (D) TOPOLOGY: linear
70
         (ii) MOLECULE TYPE: cDNA to mRNA
71
72
73
        (iii) HYPOTHETICAL: NO
74
75
         (iv) ANTI-SENSE: NO
76
77
         (vi) ORIGINAL SOURCE:
78
               (A) ORGANISM: Homo sapiens
79
               (G) CELL TYPE: Fibroblast
80
               (H) CELL LINE: WI-26 VA4
81
82
        (vii) IMMEDIATE SOURCE:
83
               (A) LIBRARY: WI-26 VA4
84
               (B) CLONE: 1
85
86
         (ix) FEATURE:
87
               (A) NAME/KEY: CDS
88
               (B) LOCATION: 88..1473
89
90
         (ix) FEATURE:
91
               (A) NAME/KEY: mat peptide
92
               (B) LOCATION: 154..1470
93
94
         (ix) FEATURE:
95
               (A) NAME/KEY: sig_peptide
96
               (B) LOCATION: 88..153
97
98
          (x) PUBLICATION INFORMATION:
99
               (A) AUTHORS: Smith, Craig A.
```

RAW SEQUENCE LISTING PATENT APPLICATION US/09/144,502A

DATE: 04/19/1999 TIME: 08:36:42

INPUT SET: S31519.raw

													I I	NPUT	3E1: 331	319.raw
100]	Davi	s, Te	erri								
101	Anderson, Dirk															
102	Solam, Lisabeth															
103	Beckmann, M. P.															
104						Jerz										
105						Dowe			n K							
106						Cosma										
107						Good	-			C						
					`	300a	νтп,	Kayı	liona	G.						
108			D			D										
109		(B) T	T.I.F.F.		Rec										
110						acto:										
111						f Ce		ar a	nd V	iral	Pro	tein	S			
112		(C) J	OURN	AL: :	Scie	nce									
113		(D) V	OLUM	E: 24	48										
114																
115																
116																
117	(x:	i) SE	OUEN	CE DI	ESCR	IPTI	ON:	SEO :	ID N	0:1:					*	
118	,	-,		:												
119	GCGAGG	DDAG	ሮልፎሮ	ሮሞሮርያ	ልር ልር	3220	יים	r aa	аста	CGAG	aacı	CCA	200 (caca	AGGGCA	60
120	OCOAGG	AGG	CAGC	C 1 G G	AO A	JAAG	3000		GC I G	COAG	GGC.	GC GA	300 .	CGCG	AGGGCA	00
121	aaaaaa	1200	0020	2000	aa a	7/7 A III/	77 31	TO 0	aa a	aa a	TO 0	3 <i>3</i> 31	TO 10	aa a	7.0	
	GGGGGC	AACC	GGAC	CCCG	CC CC	CAT										111
122											ат А.	ra va	ar T	rp A		
123							-	22	-:	20				- :	15	
124																
125	GCG CT															159
126	Ala Leu	ı Ala	Val	Gly	Leu	Glu	Leu	Trp	Ala	Ala	Ala	His	Ala	Leu	Pro	
127				-10					-5					1		
128																
129	GCC CAG	GTG	GCA	TTT	ACA	CCC	TAC	GCC	CCG	GAG	CCC	GGG	AGC	ACA	TGC	207
130	Ala Gli															
131		5					10					15			- 7 -	
132		•														
133	CGG CTC	מ מא	GAA	ጥልሮ	יייאייי	GAC	CAG	A C A	CCT	CAG	አሞር	TOO	TOO	N.C.C	***	255
134	Arg Let															233
135	20		GIU	ıyı	ıyı	_	GIII	1111	Ата	GIII		cys	Cys	Ser	гдэ	
	20	,				25					30					
136	maa															
137	TGC TCC															303
138	Cys Ser	Pro	GTÀ	GIn		Ala	Lys	Val	Phe	_	Thr	Lys	Thr	Ser	_	
139	35				40					45					50	
140																
141	ACC GTO	TGT	GAC	TCC	TGT	GAG	GAC	AGC	ACA	TAC	ACC	CAG	CTC	TGG	AAC	351
142	Thr Val	L Cys	Asp	Ser	Cys	Glu	Asp	Ser	Thr	Tyr	Thr	Gln	Leu	Trp	Asn	
143		-	_	55	-		-		60	-				65		
144																
145	TGG GT	י כככ	GAG	ፐርር	ጥጥር፤	AGC	ጥርጥ	GGC	ጥሮሮ	CGC	ጥርጥ	AGC	ጥርጥ	GAC	CAG	399
146	Trp Val															377
147	IIP var	LIO		Cys	neu	Ser	Cys	_	261	HI G	Cys	Ser		rsp	GIII	
			70					75					80			
148	ama a:		a		m~~				a				me e			
149	GTG GAA															447
150	Val Glu		GIn	Ala	Cys	Thr	_	Glu	Gln	Asn	Arg		Cys	Thr	Cys	
151		85					90					95				
152																

RAW SEQUENCE LISTING PATENT APPLICATION US/09/144,502A

DATE: 04/19/1999 TIME: 08:36:42

														IΛ	I PIIT	SET:	S31519.raw
153	AGG	CCC	GGC	TGG	TAC	TGC	GCG	CTG	AGC	AAG	CAG	GAG	GGG				495
154	Arg	Pro	Gly	Trp	Tyr	Cys	Ala	Leu	Ser	Lys	Gln	Glu	Gly	Cys	Arg	Leu	
155		100					105					110					
156																	
157	TGC	GCG	CCG	CTG	CGC	AAG	TGC	CGC	CCG	GGC	TTC	GGC	GTG	GCC	AGA	CCA	543
158	Cys	Ala	Pro	Leu	Arg	Lys	Cys	Arg	Pro	Gly	Phe	Gly	Val	Ala	Arg	Pro	
159	115					120					125					130	
160																	
161							GTG										591
162	Gly	Thr	Glu	Thr		Asp	Val	Val	Cys	-	Pro	Cys	Ala	Pro	-	Thr	
163					135					140					145		
164																	
165							TCC										639
166	Phe	Ser	Asn		Thr	Ser	Ser	Thr		IIe	Cys	Arg	Pro		GIN	Ile	
167				150					155					160			
168	mam		ama	OMO.	000	N M C	aam	000	3 3 177	003	3.00	a ma	G a m	aa 8	ama	шаа	697
169							CCT										687
170 171	Cys	ASII	165	vaı	АТА	TTE	Pro	170	ASII	Ala	per	Met	175	АТА	vaı	Cys	
172			103					1/0					1/3				
173	ACG	דיכיכי	۸cg	שרכ	כככ	ACC	CGG	ልርጥ	ΔТС	מככ	מר א	aga	CCA	сπа	CAC	тπъ	735
174							Arg										755
175	••••	180	••••	-			185	001				190		*41			
176																	
177	CCC	CAG	CCA	GTG	TCC	ACA	CGA	TCC	CAA	CAC	ACG	CAG	CCA	ACT	CCA	GAA	783
178							Arg										
179	195					200					205					210	
180																	
181	CCC	AGC	ACT	GCT	CCA	AGC	ACC	TCC	TTC	CTG	CTC	CCA	ATG	GGC	CCC	AGC	831
182	Pro	Ser	Thr	Ala	Pro	Ser	Thr	Ser	Phe	Leu	Leu	Pro	Met	Gly	Pro	Ser	
183					215					220					225		
184																	
185							ACT										879
186	Pro	Pro	Ala		Gly	Ser	Thr	Gly	_	Phe	Ala	Leu	Pro		Gly	Leu	
187				230					235					240			
188		ama		ama		~~~	mma	aam	am.	am s		3 M 3	a a.	ama	ama		007
189							TTG Leu										927
190 191	тте	vaı	245	vaı	THE	Ата	rea	250	Leu	Leu	TTE	тте	255	Val	vaı	ASII	
192			243					230					233				
193	ጥረጥ	GTC	λጥሮ	ልጥር	ACC	CAG	GTG	λλλ	λAG	λAG	מממ	ጥጥር	TCC	СТС	CAG	ΔGΔ	975
194							Val										373
195	0,2	260					265	_,_	_,_	_,_		270	-1-			••- 5	
196																	
197	GAA	GCC	AAG	GTG	CCT	CAC	TTG	CCT	GCC	GAT	AAG	GCC	CGG	GGT	ACA	CAG	1023
198							Leu										
199	275		-			280				-	285		_	-		290	
200																	
201	GGC	CCC	GAG	CAG	CAG	CAC	CTG	CTG	ATC	ACA	GCG	CCG	AGC	TCC	AGC	AGC	1071
202	Gly	Pro	Glu	Gln	Gln	His	Leu	Leu	Ile	Thr	Ala	Pro	Ser	Ser	Ser	Ser	
203					295					300					305		
204																	
205	AGC	TCC	CTG	GAG	AGC	TCG	GCC	AGT	GCG	TTG	GAC	AGA	AGG	GCG	CCC	ACT	1119

SEQUENCE VERIFICATION REPORT PATENT APPLICATION US/09/144,502A

DATE: 04/19/1999 TIME: 08:36:43

INPUT SET: S31519.raw

Line

Error

Original Text